# SEQUENCE LISTING

<110> LEUNG, Shui-on
HANSEN, Hans

<120> IMMUNOCONJUGATES AND HUMANIZED ANTIBODIES SPECIFIC FOR B-CELL LYMPHOMA AND LEUKEMIA CELLS

<130> 018733/0996

<140> US 09/741,843
<141> 2000-12-22

<150> US 09/127,902
<151> 1998-08-03

<150> US 08/690,102
<151> 1996-07-06

<150> US 08/289,576
<151> 1994-08-12

<160> 25

<170> PatentIn version 3.1

<210> 1
<211> 339
<212> DNA
<213> Murinae gen. sp.

<220>
<221> CDS
<222> (1)..(339)
<223>

<400> 1

```
gac att cag ctg acc cag tct cca tca tct ctg gct gtg tct gca gga       48
Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ala Val Ser Ala Gly
1               5                  10                  15

gaa aac gtc act atg agc tgt aag tcc agt caa agt gtt tta tac agt       96
Glu Asn Val Thr Met Ser Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
            20                  25                  30

gca aat cac aag aac tac ttg gcc tgg tac cag cag aaa cca ggg cag      144
Ala Asn His Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
        35                  40                  45

tct cct aaa ctg ctg atc tac tgg gca tcc act agg gaa tct ggt gtc      192
Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
    50                  55                  60

cct gat cgc ttc aca ggc agc gga tct ggg aca gat ttt act ctt acc      240
Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65                  70                  75                  80

atc agc aga gta caa gtt gaa gac ctg gca att tat tat tgt cac caa      288
Ile Ser Arg Val Gln Val Glu Asp Leu Ala Ile Tyr Tyr Cys His Gln
                85                  90                  95

tac ctc tcc tcg tgg acg ttc ggt gga ggg acc aag ctg gag atc aaa      336
Tyr Leu Ser Ser Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110
```

cgt 339
Arg

<210> 2
<211> 113
<212> PRT
<213> Murinae gen. sp.

<400> 2
Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ala Val Ser Ala Gly
1 5 10 15

Glu Asn Val Thr Met Ser Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
20 25 30

Ala Asn His Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
35 40 45

Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
50 55 60

Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Arg Val Gln Val Glu Asp Leu Ala Ile Tyr Tyr Cys His Gln
85 90 95

Tyr Leu Ser Ser Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

Arg

<210> 3
<211> 348
<212> DNA
<213> Murinae gen. sp.

<220>
<221> CDS
<222> (1)..(348)
<223>

<400> 3
cag gtc cag ctg cag gag tca ggg gct gaa ctg tca aaa cct ggg gcc 48
Gln Val Gln Leu Gln Glu Ser Gly Ala Glu Leu Ser Lys Pro Gly Ala
1 5 10 15

tca gtg aag atg tcc tgc aag gct tct ggc tac acc ttt act agc tac 96
Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

tgg ctg cac tgg ata aaa cag agg cct gga cag ggt ctg gaa tgg att 144
Trp Leu His Trp Ile Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile

```
        35                  40                  45

gga tac att aat cct agg aat gat tat act gag tac aat cag aac ttc      192
Gly Tyr Ile Asn Pro Arg Asn Asp Tyr Thr Glu Tyr Asn Gln Asn Phe
    50                  55                  60

aag gac aag gcc aca ttg act gca gac aaa tcc tcc agc aca gcc tac      240
Lys Asp Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65                  70                  75                  80

atg caa ctg agc agc ctg aca tct gag gac tct gca gtc tat tac tgt      288
Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
                85                  90                  95

gca aga agg gat att act acg ttc tac tgg ggc caa ggc acc act ctc      336
Ala Arg Arg Asp Ile Thr Thr Phe Tyr Trp Gly Gln Gly Thr Thr Leu
            100                 105                 110

aca gtc tcc tcg                                                     348
Thr Val Ser Ser
        115
```

<210> 4
<211> 116
<212> PRT
<213> Murinae gen. sp.

<400> 4

```
Gln Val Gln Leu Gln Glu Ser Gly Ala Glu Leu Ser Lys Pro Gly Ala
1               5                   10                  15

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30

Trp Leu His Trp Ile Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
        35                  40                  45

Gly Tyr Ile Asn Pro Arg Asn Asp Tyr Thr Glu Tyr Asn Gln Asn Phe
    50                  55                  60

Lys Asp Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65                  70                  75                  80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Arg Asp Ile Thr Thr Phe Tyr Trp Gly Gln Gly Thr Thr Leu
            100                 105                 110

Thr Val Ser Ser
        115
```

<210> 5
<211> 339
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(339)
<223>

<400> 5

```
gac att cag ctg acc cag tct cca tca tct ctg agc gca tct gtt gga        48
Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1               5                  10                  15

gat agg gtc act atg agc tgt aag tcc agt caa agt gtt tta tac agt        96
Asp Arg Val Thr Met Ser Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
            20                  25                  30

gca aat cac aag aac tac ttg gcc tgg tac cag cag aaa cca ggg aaa       144
Ala Asn His Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys
        35                  40                  45

gca cct aaa ctg ctg atc tac tgg gca tcc act agg gaa tct ggt gtc       192
Ala Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
    50                  55                  60

cct tcg cga ttc tct ggc agc gga tct ggg aca gat ttt act ttc acc       240
Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr
65                  70                  75                  80

atc agc tct ctt caa cca gaa gac att gca aca tat tat tgt cac caa       288
Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys His Gln
                85                  90                  95

tac ctc tcc tcg tgg acg ttc ggt gga ggg acc aag gtg cag atc aaa       336
Tyr Leu Ser Ser Trp Thr Phe Gly Gly Gly Thr Lys Val Gln Ile Lys
            100                 105                 110

cgt                                                                   339
Arg
```

<210> 6
<211> 113
<212> PRT
<213> Homo sapiens

<400> 6

```
Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1               5                  10                  15

Asp Arg Val Thr Met Ser Cys Lys Ser Ser Gln Ser Val Leu Tyr Ser
            20                  25                  30

Ala Asn His Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys
        35                  40                  45

Ala Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val
    50                  55                  60

Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr
65                  70                  75                  80
```

```
Ile Ser Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys His Gln
                85                  90                  95

Tyr Leu Ser Ser Trp Thr Phe Gly Gly Gly Thr Lys Val Gln Ile Lys
            100                 105                 110

Arg
```

<210> 7
<211> 348
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(348)
<223>

<400> 7

```
cag gtc cag ctg gtc caa tca ggg gct gaa gtc aag aaa cct ggg tca        48
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1               5                   10                  15

tca gtg aag gtc tcc tgc aag gct tct ggc tac acc ttt act agc tac        96
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
            20                  25                  30

tgg ctg cac tgg gtc agg cag gca cct gga cag ggt ctg gaa tgg att       144
Trp Leu His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
        35                  40                  45

gga tac att aat cct agg aat gat tat act gag tac aat cag aac ttc       192
Gly Tyr Ile Asn Pro Arg Asn Asp Tyr Thr Glu Tyr Asn Gln Asn Phe
    50                  55                  60

aag gac aag gcc aca ata act gca gac gaa tcc acc aat aca gcc tac       240
Lys Asp Lys Ala Thr Ile Thr Ala Asp Glu Ser Thr Asn Thr Ala Tyr
65                  70                  75                  80

atg gag ctg agc agc ctg agg tct gag gac acg gca ttt tat ttt tgt       288
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Phe Tyr Phe Cys
                85                  90                  95

gca aga agg gat att act acg ttc tac tgg ggc caa ggc acc acg gtc       336
Ala Arg Arg Asp Ile Thr Thr Phe Tyr Trp Gly Gln Gly Thr Thr Val
            100                 105                 110

acc gtc tcc tcg                                                       348
Thr Val Ser Ser
        115
```

<210> 8
<211> 116
<212> PRT
<213> Homo sapiens

<400> 8

```
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1               5                   10                  15
```

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Leu His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Ile Asn Pro Arg Asn Asp Tyr Thr Glu Tyr Asn Gln Asn Phe
50 55 60

Lys Asp Lys Ala Thr Ile Thr Ala Asp Glu Ser Thr Asn Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Phe Tyr Phe Cys
85 90 95

Ala Arg Arg Asp Ile Thr Thr Phe Tyr Trp Gly Gln Gly Thr Thr Val
100 105 110

Thr Val Ser Ser
115

<210> 9
<211> 116
<212> PRT
<213> Homo sapiens

<400> 9
Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Trp Leu His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

Gly Tyr Ile Asn Pro Arg Asn Asp Tyr Thr Glu Tyr Asn Gln Asn Phe
50 55 60

Lys Asp Lys Ala Thr Ile Thr Ala Asp Glu Ser Thr Asn Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Phe Tyr Phe Cys
85 90 95

Ala Arg Arg Asp Ile Thr Thr Phe Tyr Trp Gly Gln Gly Thr Thr Val
100 105 110

Thr Val Ser Ser
115

<210> 10
<211> 149
<212> DNA
<213> Unknown

<220>
<223> synthetic sequence

<400> 10
tataatcatt cctaggatta atgtatccaa tccattccag accctgtcca ggtgcctgcc 60

tgacccagtg cagccagtag ctagtaaagg tgtagccaga agccttgcag gagaccttca 120

ctgatgaccc aggtttcttg acttcagcc 149

<210> 11
<211> 134
<212> DNA
<213> Unknown

<220>
<223> synthetic sequence

<400> 11
ccccagtaga acgtaatatc ccttgcacaa aaataaaatg ccgtgtcctc agacctcagg 60

ctgctcagct ccatgtaggc tgtattggtg gattcgtctg cagttattgt ggccttgtcc 120

ttgaagttct gatt 134

<210> 12
<211> 38
<212> DNA
<213> Unknown

<220>
<223> primer

<400> 12
ccagctggtc caatcagggg ctgaagtcaa gaaacctg 38

<210> 13
<211> 33
<212> DNA
<213> Unknown

<220>
<223> primer

<400> 13
aagtggatcc tataatcatt cctaggatta atg 33

<210> 14
<211> 49
<212> DNA
<213> Unknown

<220>
<223> primer

<400> 14
taatcctagg aatgattata ctgagtacaa tcagaacttc aaggacaag 49

<210> 15
<211> 44
<212> DNA
<213> Unknown

<220>
<223> primer

<400> 15
ggagacggtg accgtggtgc cttggcccca gtagaacgta gtaa 44

<210> 16
<211> 150
<212> DNA
<213> Unknown

<220>
<223> synthetic sequence

<400> 16
cctagtggat gcccagtaga tcagcagttt aggtgctttc cctggtttct gctggtacca 60

ggccaagtag ttcttgtgat ttgcactgta taaaacactt tgactggact tacagctcat 120

agtgacccta tctccaacag atgcgctcag 150

<210> 17
<211> 52
<212> DNA
<213> Unknown

<220>
<223> primer

<400> 17
gacaagcttc agctgaccca gtctccatca tctctgagcg catctgttgg ag 52

<210> 18
<211> 45
<212> DNA
<213> Unknown

<220>
<223> primer

<400> 18
agagaatcgc gaagggacac cagattccct agtggatgcc cagta 45

<210> 19
<211> 121
<212> DNA
<213> Unknown

<220>
<223> synthetic sequence

<400> 19
gcaccttggt ccctccaccg aacgtccacg aggagaggta ttggtgacaa taatatgttg 60

caatgtcttc tggttgaaga gagctgatgg tgaaagtaaa atctgtccca gatccgctgc 120

c 121

<210> 20
<211> 40
<212> DNA
<213> Unknown

<220>
<223> primer

<400> 20
gacaagcttt cgcgattctc tggcagcgga tctgggacag 40

<210> 21
<211> 33
<212> DNA
<213> Unknown

<220>
<223> primer

<400> 21
gaccggcaga tctgcacctt ggtccctcca ccg 33

<210> 22
<211> 339
<212> DNA
<213> Murinae gen. sp.

<220>
<221> CDS
<222> (1) .. (339)
<223>

<400> 22
acgtttgatc tccagcttgg tccctccacc gaacgtccac gaggagaggt attggtgaca 60

ataataaatt gccaggtctt caacttgtac tctgctgatg gtaagagtaa aatctgtccc 120

agatccgctg cctgtgaagc gatcagggac accagattcc ctagtggatg cccagtagat 180

cagcagttta ggagactgcc ctggtttctg ctggtaccag gccaagtagt tcttgtgatt 240

tgcactgtat aaaacacttt gactggactt acagctcata gtgacgtttt ctcctgcaga 300

cacagccaga gatgatggag actgggtcag ctgaatgtc 339

<210> 23
<211> 348
<212> DNA
<213> Murinae gen. sp.

<220>
<221> CDS
<222> (1) .. (348)
<223>

<400> 23
cgaggagact gtgagagtgg tgccttggcc ccagtagaac gtagtaatat cccttcttgc 60

acagtaatag actgcagagt cctcagatgt caggctgctc agttgcatgt aggctgtgct 120

ggaggatttg tctgcagtca atgtggcctt gtccttgaag ttctgattgt actcagtata 180

atcattccta ggattaatgt atccaatcca ttccagaccc tgtccaggcc tctgttttat 240

ccagtgcagc cagtagctag taaaggtgta gccagaagcc ttgcaggaca tcttcactga 300

ggccccaggt tttgacagtt cagcccctga ctcctgcagc tggacctg 348

<210> 24
<211> 339
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(339)
<223>

<400> 24
acgtttgatc tgcaccttgg tccctccacc gaacgtccac gaggagaggt attggtgaca 60

ataatatgtt gcaatgtctt ctggttgaag agagctgatg gtgaaagtaa aatctgtccc 120

agatccgctg ccagagaatc gcgaagggac accagattcc ctagtggatg cccagtagat 180

cagcagttta ggtgctttcc ctggtttctg ctggtaccag gccaagtagt tcttgtgatt 240

tgcactgtat aaaacacttt gactggactt acagctcata gtgaccctat ctccaacaga 300

tgcgctcaga gatgatggag actgggtcag ctgaatgtc 339

<210> 25
<211> 348
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)..(348)
<223>

<400> 25
cgaggagacg gtgaccgtgg tgccttggcc ccagtagaac gtagtaatat cccttcttgc 60

acaaaaataa aatgccgtgt cctcagacct caggctgctc agctccatgt aggctgtatt 120

ggtggattcg tctgcagtta ttgtggcctt gtccttgaag ttctgattgt actcagtata 180

atcattccta ggattaatgt atccaatcca ttccagaccc tgtccaggtg cctgcctgac 240

ccagtgcagc cagtagctag taaaggtgta gccagaagcc ttgcaggaga ccttcactga 300

tgacccaggt ttcttgactt cagcccctga ttggaccagc tggacctg 348